Opisthobranch Mollusks Dredged in San Francisco Bay During the Period 1966 to 1971

BY

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(I Text figure)

INTRODUCTION

PREVIOUSLY UNREPORTED NUDIBRANCHS from San Francisco Bay have been dredged from 1966 to 1971. Extensive accounts of the opisthobranch mollusks of the central California coast have been given by MARCUS (1961); STEIN- BERG (1963) and MACFARLAND (1966), while the occurrence of nudibranchs in San Francisco Bay has been reported by Gosliner & Williams (1970) and Behrens (1971). APLIN (1967) reports that nudibranchs were dredged and collected intertidally during his study, but not identified.

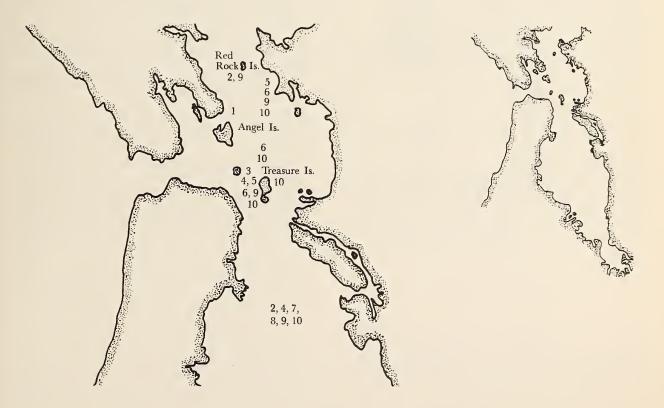


Figure 1

San Francisco Bay from Red Rock Island on the north to South Bay. Insert shows San Francisco Bay.

- 1. Acanthodoris nanaimoensis;
- 3. Anisodoris nobilis;
- 2. Aeolidia papillosa;
- 4. Archidoris montereyensis;
- 9. Hermissenda crassicornis;
- 5. Armina californica;
- 7. Diaulula sandiegensis;
- 6. Dendronotus frondosus;
 - 8. Dirona picta;

- 10. Tritonia exsulans

Biological samples were taken in San Francisco Bay using an Otter trawl and a bag dredge periodically from May 1966 to August 1971. Nudibranchs were encountered frequently during the summer months and rarely in winter months.

DISTRIBUTION AND OCCURRENCE

Acanthodoris nanaimoensis O'Donoghue, 1921

July 1971

North of Angel Island

Aeolidia papillosa (Linnaeus, 1761)

July, August 1969

South of Red Rock Island; south San Francisco Bay

Anisodoris nobilis (MacFarland, 1905)

May 1968

West of Treasure Island

Archidoris montereyensis (Cooper, 1862)

July 1966; August 1971

West of Treasure Island; south San Francisco Bay

Armina californica (Cooper, 1862)

July, August 1971

West of Treasure Island; South Hampton Shoal

Dendronotus frondosus (Ascanius, 1774)

June, July 1966; July 1968; July 1971

West and north of Treasure Island; South Hampton Shoal

Diaulula sandiegensis (Cooper, 1862)

July 1966; August 1969

South San Francisco Bay

Dirona picta MacFarland in Cockerell & Eliot, 1905

December 1969

South San Francisco Bay

Hermissenda crassicornis (Eschscholtz, 1831)

July 1966; May 1968; July 1969; July 1971

South San Francisco Bay; west of Treasure Island; South Hampton Shoal; south of Red Rock Island Tritonia exsulans Bergh, 1894

May, June, July 1966; May, July 1968; January 1969;

January 1970; July 1971

East, west, and north of Treasure Island; South San

Francisco Bay; South Hampton Shoal

The most frequently encountered and most numerous nudibranch was *Tritonia exsulans* which occurred in the northern and southern regions of San Francisco Bay and throughout the sampling period.

During the summer months *Dendronotus frondosus* and *Hermissenda crassicornis* were dredged and maintained in the laboratory where numerous egg masses were laid.

Occurring infrequently in summer months were Archidoris montereyensis and Diaulula sandiegensis.

Aeolidia papillosa, Anisodoris nobilis and Armina californica rarely occurred, but when collected, numerous individuals of each species were obtained.

Acanthodoris nanaimoensis and Dirona picta were represented by single individuals only.

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